

Flags as Flair: The Iconography of Space Shuttle Mission Patches

By ANNE M. PLATOFF

Part 1: The origin of mission patches, and patches of the pre-shuttle era

Introduction

In the 1999 movie *Office Space*, a waitress is required to wear “15 pieces of flair” (colorful buttons) on her uniform. She is instructed that they should show her personality and that this was an opportunity to express herself. We live in a culture where we are surrounded by such symbols and where this type of visual communication is commonplace. Not surprisingly, the “flair” style of symbolic expression not only permeates our daily lives, but also has become commonplace in the formal system of symbolism used within the U.S. government. The flags, seals, logos, and other graphical emblems used throughout the government are awash with a plethora of symbols which are frequently combined with the intent of communicating something about the agency or program they represent. This paper will examine one small subset of these symbols—the crew patches designed for Space Shuttle missions by their crews. It will examine the variety of symbols used, with special emphasis on the use of flags as “flair.”¹

There are many symbols associated with the National Aeronautics and Space Administration (NASA) and the United States space program. Among these are the symbols that represent the agency, various flags, program insignia, and special emblems designed to represent specific space missions. The symbols of NASA and many of the specialized flags that have been designed as part of NASA’s programs have been documented in my earlier work, “Flags in Space: NASA Symbols and Flags in the U.S. Manned Space Program,” published as a special double issue of *The Flag Bulletin* in 2010.² In a follow-up paper focusing on the use of flags in the Space Shuttle Program, “A Shuttle Full of Flags: Use of Flags in the Space Shuttle Program,” I added more detail on the use of flags in this program and reported on new flag designs that had been discovered over the past several years. I also touched briefly on the use of flags on Space Shuttle mission patches.³

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Editor's Note / Note de la rédaction

THIS ISSUE CONCLUDES THE INAUGURAL VOLUME OF THE QUARTERLY AND PROVIDES a welcome opportunity to reflect on the state of vexillology. Conceived as a contribution to the discipline by providing a needed forum for innovative short-form articles, essays, and book reviews that engage the history, culture, and meaning of flags from any perspective, the *Quarterly* seeks to advance the interdisciplinary study of flags. Any measurement of our success depends on how we meet this goal. After four issues, I am confident that we have met the challenge of starting a new publication that makes a meaningful contribution to vexillology.

The *Quarterly* has provided readers with a rich mix of articles, essays, and reports that cover vexillological topics from a number of viewpoints, including history, political science, conservation, and institutional development and security. You will recall that our inaugural issue began with a cogent essay by Tony Burton that suggested that perhaps much current vexillological activity is misdirected and provided a wonderful introduction to the work we seek to feature on these pages.

Quite simply, then, we are unafraid of any topic that seeks to make a serious contribution to the field. That, of course, does not mean that submissions have to be dry, dull, or tedious; we thankfully have avoided that so far, and I intend to keep that record intact!

Although people often identify a publication with its editor, each issue is fundamentally a collective effort. The Association's Executive Board provides the needed funding and support for this endeavor. The individual officers provide encouragement and advice for both logistical and substantive issues, as does the Publications Committee and the *Quarterly's* editorial board. Ultimately, though, it is our contributors to whom I owe the greatest thanks. Their thoughtful writing, varied approaches, and cheerfulness in all of our dealings makes editing this journal a joy.

The *Quarterly* was founded to provide a lively space for the discussion of flags, why we study them, and how they help us understand society, its institutions, and its cultures. At the risk of repeating myself, I wish to recall my words from the last issue in discussing Whitney Smith's mind and his heart. "He was drawn to flags because he wanted to explore how they participate in the human experience, because studying flags was, and is, an underappreciated way of studying what it means to be human," I said. "Let us all follow this example when exploring flags in all of their dimensions, to learn all that these mysterious objects have to teach us about ourselves." I can think of no better way to end this note of thanks to him and others who have led the way for all of us.

KENNETH HARTVIGSEN

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Platoff: Patches illustrate the importance of flag symbolism in society

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For space enthusiasts, the mission patches are perhaps the most popular symbols to come out of the space program. Why are so many people interested in these emblems? Mission patches are typically very colorful and visually interesting. The symbolism used on the patches is usually easily understood and helps convey a message about what astronauts on that mission did while they were in orbit. Souvenir patches are relatively cheap, giving the average space enthusiast an affordable way to collect a tangible item connecting them to the mission and the adventures of the astronauts on each flight. High-end collectors scan auction websites, seizing opportunities to obtain actual patches that had been flown on those missions as souvenirs and were later presented to NASA employees and contractors in appreciation of their work on the missions. In all, mission patches are a publically-accessible and visually-interesting tangible connection to individual space missions and the continuing human exploration of space.⁴

Within NASA, the patches are an important aspect of the human spaceflight program. Creation of a distinctive crew emblem (insignia or patch) is one of the first tasks that a new crew undertakes in preparation for their flight. Once approved, the insignia is used on documentation for the mission, is worn by the crew on their flight suits while training, and becomes a distinctive visual identifier for the mission across the agency. These emblems are not only of interest to the space enthusiast, but can also be an interesting topic of study for vexillologists. Not surprisingly, flags and flag symbolism have worked their way into a large number of space mission patch designs. This was especially evident during the Space Shuttle Program. As will be demonstrated in this paper, observation of flag usage on the mission insignia can tell us a lot about the nature of space exploration throughout its history, and can also serve as an illustration of the importance of flag symbolism in our society.⁵

Origins of Mission Patches

While Part II of this paper will provide a detailed analysis of mission patches during the Space Shuttle era, this first installment will seek to describe the origin of these insignia within the context of the United States manned space program. During Project Mercury and the first flights of Project Gemini, there were no individual emblems created to represent each flight. Those commonly sold by space souvenir vendors were actually created later. The first unique mission patch was designed by the Gemini V (GT-5) crew for their 1965 flight. Most likely, the crew was influenced by the tradition in the American military of designing unique insignias



Figure 1: Gemini 5 mission patch as flown. Careful examination of the image reveals the stitch marks where parachute fabric has been sewn over the slogan in order to obtain approval from NASA. *NASA image S66-59530.*

for distinctive units and teams. As the story goes, the design of the patch was the idea of astronaut Gordon Cooper. He chose a Conestoga wagon as the central emblem on the patch to represent the pioneering nature of space travel at the time. Playing on an old slogan used by pioneers heading west—"California or Bust"—he added a slogan "8 Days or Bust" to the side of the wagon's cover. This emphasized the objective of the mission to extend the duration of American space flights. Of course, as participants in an important government program which would generate lots of publicity, the choice of a mission emblem did not lie just in the hands of the crew. The design required approval at the top levels of NASA. It is not surprising that the administrators objected to the slogan on the wagon. Spaceflight was still in its infancy, and NASA was concerned that use of the slogan would only emphasize that the American space program was "busted" if the mission duration was changed due to technical issues. The crew agreed to a compromise wherein the slogan on the patches would be covered up and they were allowed to proceed with the first NASA mission patch affixed to their spacesuits.⁶

In approving the Gemini V mission patch, NASA Administrator James Webb also formalized what has become a long-standing tradition among the crews of space missions administered by NASA and its international partners. In a memo to Donald "Deke" Slayton, Chief of the Astronaut Office at the Manned Spacecraft Center (MSC; now the Johnson Space Center or JSC) in Houston, he specified the initial



Figure 2. Apollo 1 crew emblem featuring an implied-flag as the border. *NASA image S66-36742.*

NASA policy regarding crew emblems:

As I promised at Houston, the question of the identification patch or emblem that Cooper and Conrad wish to wear on Gemini flight 5 has been thoroughly discussed and it is now agreed by Gilruth, Mueller, Dryden, Seamans, and myself as follows:

1. On GT-5 and future Gemini flights, such an identification may be worn on the right breast beneath the name plate of the astronaut; said "patch" to be no larger than the NASA emblem worn on the left breast. This patch will be referred to by the generic name of the "Cooper patch." If such "Cooper patch" is not to be worn, the designation of the flight "Gemini 6" or "Gemini 7" may be suitably put beneath the nameplate.

2. For GT-5, the "Cooper patch" will be the one submitted, except that the size must be in accordance with paragraph 1 above, unless it is impossible to get it remade in time, and it must be worn on the suit at the location specified.

3. For Gemini flights after GT-5, the crew commander or senior pilot will be permitted to designate or design or recommend a "Cooper patch" for his flight, subject to approval by both the Director of the Manned Spacecraft Center and the Associate Administrator for Manned Space Flight at NASA headquarters. Until further notice, the Associate Administrator for Manned Space Flight will, prior

to approval, submit the design to the Administrator for his concurrence.

4. A policy for flights after the present Gemini series will be recommended by the Director of the Manned Spacecraft Center.

Webb also announced his decision to the public by issuing a short press release about the new practice of using mission patches.⁷

Of the eight mission patches used during the Gemini program, five follow the tradition of including the crewmember's names while three omit them. All of the patches include the flight numbers, either in the Roman numerals used in the official flight designations or in more commonly used Arabic-based numerals. Most imagery on the patches is directly related to the Gemini spacecraft, docking modules, or other space-related themes. The emblem of Gemini XII hints at the true purpose of Project Gemini as a precursor to the Apollo Program by showing a crescent moon in the lower left-hand portion of the patch. None of the patch designs incorporate flags or flag symbolism.⁸

By the time the Apollo Program crews went about the process of designing their patches, the procedures within NASA were established and the designs became more complex. The first Apollo crew was unofficially called "Apollo 1," although the official designation given to their flight was Apollo 204 (at the time it was undecided if there would be unmanned Apollo launches prior to their mission). Following the tradition established during Gemini, the patch for the flight was designed by the crew with assistance from a graphic artist. The design was the first to incorporate American flag imagery, as it uses an "implied" flag—in which elements of a flag are used to imply the presence of a full flag—as the border of the patch. On a gold ring within the flag border, the astronaut's names and the flight designation "Apollo 1" is shown in black lettering. The background of the patch depicts the Earth with the Apollo command and service modules in orbit and the full moon in the distance. Unfortunately, the crew of Apollo 204 was killed in a flash fire during a training exercise at the launch pad in Florida on 27 January 1967. The patch was never flown in space and the crew designation "Apollo 1" was retired and never used in flight. This patch stands as a visual tribute to these astronauts who lost their lives in pursuit of the the efforts of the United States to place a man on the Moon.⁹

After the Apollo 204 accident, NASA engineers worked to determine the cause of the fire and to mitigate the risks to crew members. It was a year and a half before a crew would fly as part of the Apollo Program. The first manned flight was Apollo 7, which launched on 11 October 1968 and spent 10 days in orbit. Early Apollo mission patch designs focus on the step-by-step progress toward the ultimate goal of a

manned moon landing. Apollo 7's patch shows the Apollo spacecraft achieving Earth orbit for the first time. The Apollo 8 patch shows a "figure 8" flight path around the Earth and the Moon, emphasizing the importance of the first circumlunar flight. On the Apollo 9 patch, the astronauts illustrated the first docking of the command module to the lunar module, as they tested this important capability in Earth orbit. And on the patch for Apollo 10, there is a depiction of the lunar module being tested in lunar orbit during the final precursor to the first moon landing. All of these patches featured imagery of the space hardware essential to the mission, the names of the crew members, and the mission designation. Three of the emblems showed the Earth, with two of them also illustrating the eventual destination of the Apollo Program—the Moon. No patches in this group incorporate patriotic or flag imagery in their designs.¹⁰

Perhaps the most memorable of the Apollo mission insignias is the crew patch for Apollo 11—the first mission in which astronauts set foot on the lunar surface. Astronaut Michael Collins documented the design process in his memoir, *Carrying the Fire*. He noted that the bald eagle was chosen both as a patriotic symbol of the United States and as a symbol of flight. The eagle was portrayed with its wings and talons poised for landing, not on a tree branch but on the surface of the Moon. In the background we see the crew's point of origin—the gibbous Earth in the distance. The crew had originally symbolized the peaceful intent of their mission by placing an olive branch in the bird's beak. However, when the design was forwarded to NASA Headquarters in Washington, the administrators expressed concern that the eagle's talons looked too threatening. The compromise design, with the eagle grasping the olive branch in its talons, became an iconic symbol of U.S. achievement in space. It is also notable that the astronauts chose to omit their names from the patch, leaving the mission designation as the only writing on the emblem.¹¹

After the success of Apollo 11, the rest of the Apollo landing missions proceeded without the same level of public interest in the program. The patch designs once again included both the flight designation and the names of the crew members. Images on the patches became more imaginative and symbolic. The patch for Apollo 12 shows a naval clipper ship entering into orbit around the Moon. Most notable for vexillologists, the ship is flying a U.S. flag from the top of its mast—the first full flag shown on a crew mission patch. Apollo 13's emblem shows the program's namesake—the Greco-Roman sun god Apollo, driving his solar chariot across the surface of the Moon. The insignia of Apollo 14 showed the emblem of the Astronaut Corps in route from the Earth to the Moon. The final three lunar-landing mission emblems are of most interest to the study of flags, because



Figure 3. The Apollo 11 mission insignia incorporates both patriotic imagery (the bald eagle) and an international symbol of peace (the olive branch) to emphasize that the astronauts "came in peace for all mankind." NASA Image S69-34875.

they incorporate colors and imagery which allude to the U.S. flag. On the insignia of Apollo 15 the red, white, and blue colors of the flag are used to form the border of the patch and for the three stylized birds shown flying over the lunar surface. The Apollo 16 emblem uses a shield in the national colors similar to that on the Great Seal of the United States behind a flight vector based upon that on the NASA insignia (except in gold). A bald eagle is landing on top of the shield and sixteen white stars on blue, similar to those on the U.S. flag, circle around the border of the patch. The flag imagery on the Apollo 17 patch is more abstract, incorporating red stripes from the flag to form the wings of a stylized eagle. At the top of the wings are three white stars on blue, representing the three crew members.¹²

There were four additional U.S. space missions that used the Apollo spacecraft—three Skylab missions and the Apollo-Soyuz Test Project (ASTP). These final flights were all Earth-orbital missions. Only the last of these missions had any flag symbolism associated with the mission emblem, and on that patch the allusion to flags is quite subtle. ASTP was the first international space mission and the objective was to dock a U.S. Apollo spacecraft to a Soviet Soyuz spacecraft in orbit. As such, the symbolism of the patch design was heavily scrutinized. Initially the crew submitted a patch proposal that relied heavily on flag imagery. The design used implied U.S. and Soviet flags in the background, with the two



Figures 4-7. Flag-related mission patches from (top row) Apollo 12, Apollo 15, (bottom row) Apollo 16, and Apollo 17. *NASA Images S69-52336, S71-30463, S71-56246, and S69-52336.*

spacecraft docked in orbit overlapping the full Earth in the foreground. There are three stars on the U.S. flag representing the American astronauts, and the Soviet flag has two stars representing the two cosmonauts involved in the mission.

According to a memo from the Assistant Administrator for Public Affairs, the crew's patch design was rejected by NASA Headquarters for the following reasons:

1. It is a graphic nightmare.
2. It uses six colors, which in addition to artistic considerations, will create additional costs and problems in reproduction.
3. The hardware is not to scale.
4. The word "Apollo" is not readable when the patch



is right side up.

5. The “symbology can easily be misinterpreted. (During consideration of alternate designs for the official ASTP emblem in Moscow last October, the Russians made the point that too literal a rendering of the docked spacecraft hovering over earth could create the impression that the US and USSR were joining in space to exercise worldwide hegemony.

In the final approved version of the insignia the focus is on the two spacecraft in the act of docking, with the sun in the background at upper left and the Earth at lower right. At the top of the patch are the spacecraft names “Apollo/Союз” and below are the names of the crew members (with the American names in Latin letters and the Russian names in Cyrillic). The three Apollo astronauts are represented by three white stars on blue to the left of the spacecraft names, perhaps reminiscent of the stars on a U.S. flag. To the right are two gold stars on red representing the Soviet cosmonauts, perhaps recalling the gold-on-red color scheme that was frequently used on some versions of the Soviet flag. The star was the only symbol that the U.S. and Soviet flags had in common, so its use was based upon symbolic common ground between the two nations. It is also interesting to note that the crew patch worn by the cosmonauts incorporated both flags into the design.¹³

Patches in the Space Shuttle Era

The initiation of the Space Shuttle Program opened up a new era for the design of crew mission patches. Flights into space became more frequent and crew sizes increased as the program progressed. In the second part of this paper, an analysis of Space Shuttle mission patches will reveal that the insignias designed for the flights also became more complex and incorporated a wider array of symbols. It was perhaps the larger crew size that led many of these patches to be more “flair like.” Just as the waitress in *Office Space* was encouraged to express herself through the wearing of more flair on her

Figures 8-10. From left: Rejected design for the American crew patch for the Apollo Soyuz Test Project, final approved NASA ASTP crew patch, and Soviet ASTP crew patch. *Courtesy JSC Archives, Univ. of Houston at Clear Lake, NASA Image S75-20361, and Courtesy Eugene Dorr.*

uniform, the larger crews may have felt that more symbols on their patches would help them to better reflect the interests of the individual astronauts, their roles in the missions, and the goals of their flights.

This paper was presented as part of the program at the 47th Annual Meeting of the Association, 12 October 2013, in Salt Lake City, Utah. Part 2 will be published in the next issue of Flag Research Quarterly (No. 5, March 2014).

Notes

¹ The *Urban Dictionary* offers the following definition of “flair”: “Flair” is a general term used to describe round buttons of various sizes pinned to one’s shirts and used to express one’s self. Popularized by the 1999 film “Office Space,” where a restaurant “Chotchkie’s” required employees to wear “at least” 15 pieces of flair.

Definition of “flair,” *Urban Dictionary*, <http://www.urbandictionary.com/define.php?term=flair>, accessed 21 October 2013.

² Anne M. Platoff, “Flags in Space: NASA Symbols and Flags in the U.S. Manned Space Program,” *The Flag Bulletin* No. 230 (vol. 46, no. 5-6) (Sept.-Dec. 2007)(actual pub. date 2010).

³ Anne M. Platoff, “A Shuttle Full of Flags: Use of Flags in the Space Shuttle Program,” presented to the 25th International Congress of Vexillology (ICV 25); publication pending in the conference proceedings.

⁴ Most sources of information about mission patches are written for a popular audience. For more information on space patches, the author recommends the following: Judith Kaplan and Robert Muniz, *Space Patches: From Mercury to the Space Shuttle* (New York: Sterling Publishing Co., 1986); Gregory L. Vogt, *Space Mission Patches* (Brookfield, Conn.: The Millbrook Press, 2001); and Eugene Dorr, *Space Mission Patches* website, <http://genedorr.com/patches/Intro.html>, accessed 30 June 2013. Vogt’s book is a children’s chapter book, but it is still useful to the scholar who is interested in this topic. An overview of space mission patches within the context of the history of military symbolism can be found in A. Brumfitt, L. A. Thompson, and D. Raitt, “The Art and Science of Mission Patches and Their Origins in Society,” *Acta Astronautica*, v. 62 (2008), p. 715-720.

⁵ Kaplan and Muniz; Vogt; *Space Mission Patches* website.



Figure 11. The Apollo 8 patch was in the shape of the command module and depicted the flightpath of the first circum-lunar Apollo mission. *NASA image.*

⁶ "Mission Patch," *Wikipedia: The Free Encyclopedia*, http://en.wikipedia.org/wiki/Mission_patch, accessed 3 April 2013; Dorr, "About Patches," *Space Mission Patches* website, <http://genedorr.com/patches/About.html>, accessed 3 April 2013; Dorr, "History of Patches," *Space Mission Patches* website, <http://genedorr.com/patches/History.html>, accessed 3 April 2013; Travis K. Kircher, "More Than Just a Merit Badge," *Ad Astra magazine* (Nov/Dec 2000), pp. 23-25, available online at http://www.collect-space.com/resources/patches_astronauts.html, accessed 3 April 2013; Kaplan and Muniz, p. 42-43, 69-102; Keith T. Wilson, "The First US Astronaut Crew Patches," *Spaceflight* v. 38 (May 1996), p. 172-173; Eddie Pugh, "Space Patches," *Spaceflight News* #23 (November 1987), p. 44-45; Dick Lattimer, "All We Did Was Fly to the Moon": A Mini-History of America's Manned Moon Program Including America's Astronaut Patches and Callsigns (Gainesville, Florida: Whispering Eagle Press, 1983), p. 24-25; Gemini 5 Mission Insignia, NASA Image S66-59530 (August 1965), <http://spaceflight.nasa.gov/gallery/images/gemini/gemini5/html/s66-59530.html>, accessed 29 June 2013; Russell F. Still, *Relics of the Space Race*, 3rd edition (Roswell, Georgia: PR Productions, 2001), p. 193-196, 209; Dorr, "Gemini 5," *Space Mission Patches* website, <http://genedorr.com/patches/Gemini/Ge05.html>, accessed 29 June 2013. Dorr's site shows a variety of images of the Gemini 5 patch, both with and without the unapproved slogan. On the NASA image (S66-59530) careful examination reveals stitching where a small piece of parachute fabric had been sewn over the slogan before the flight.

⁷ James E. Webb, NASA Administrator, "Memorandum for: Mr. Donald K. Slayton, MSC, Houston, Texas" (14 August 1965), from the *Space Mission Patches* website, <http://genedorr.com/patches/Webb.html>, accessed 19 June 2013; Lattimer, p. 24-25.

⁸ Wilson, p. 172-173; Lattimer, p. 26-39; Still, p. 195-197; Dorr, "Gemini," *Space Mission Patches* website, <http://genedorr.com/patches/IndexGe.html>, accessed 29 June 2013.

⁹ Lattimer, p. 46-47; Still, p. 198; Dorr, "Apollo 1," *Space Mission Patches* website, <http://genedorr.com/patches/Apollo/Ap01.html>, accessed 29 June 2013; Apollo 1 Mission Insignia, NASA Image S66-36742 (1966),

<http://spaceflight.nasa.gov/gallery/images/apollo/apollo1/html/s66-36742.html>, accessed 29 June 2013; "Mission Insignias," in Richard W. Orloff, *Apollo by the Numbers: A Statistical Reference for the Manned Phase of Project Apollo* (self-published, 1996), p. 24,

<http://georgetyson.com/files/apollostatistics.pdf>, accessed 30 June 2013. ¹⁰ Kaplan and Muniz, p. 9-10, 47-51; Lattimer, p. 48-63; Still, p. 198-199; Orloff, p. 24, <http://georgetyson.com/files/apollostatistics.pdf>, accessed 30 June 2013; Dorr, "Apollo," *Space Mission Patches* website, <http://genedorr.com/patches/IndexAp.html>, accessed 30 June 2013.

¹¹ Lattimer, p. 64-71; Orloff, p. 24; Still, p. 199-200; Michael Collins, *Carrying the Fire: An Astronaut's Journeys* (New York: Farrar, Straus and Giroux, 1974), p. 332-336; Apollo 11 Mission Insignia, NASA Image S69-34875 (June 1969),

http://spaceflight.nasa.gov/gallery/images/apollo/apollo11/html/s69_34875.html, accessed 30 June 2013; Dorr, "Apollo 11," *Space Mission Patches* website, <http://genedorr.com/patches/Apollo/Ap11.html>, accessed 30 June 2013; Kaplan and Muniz, p. 51-54.

¹² Lattimer, p. 72-95; Kaplan and Muniz, p. 55-60; Still, p. 200-202; Eugene Dorr, "Collection: Space Patches," *Eye: The International Review of Graphic Design*, v. 14 #56 (1 June 2005), p. 72; Apollo 12 Mission Insignia, NASA Image S69-52336 (September 1969),

<http://spaceflight.nasa.gov/gallery/images/apollo/apollo12/html/s69-52336.html>, accessed 30 June 2013; Dorr, "Apollo 12," *Space Mission Patches* website, <http://genedorr.com/patches/Apollo/Ap12.html>, accessed 30 June 2013; Apollo 15 Mission Insignia, NASA Image S71-30463 (May 1971),

<http://spaceflight.nasa.gov/gallery/images/apollo/apollo15/html/s71-30463.html>, accessed 30 June 2013; Dorr, "Apollo 15," *Space Mission Patches* website, <http://genedorr.com/patches/Apollo/Ap15.html>, accessed 30 June 2013; Apollo 16 Mission Insignia, NASA Image S71-56246 (March 1972),

<http://spaceflight.nasa.gov/gallery/images/apollo/apollo16/html/s71-56246.html>, accessed 30 June 2013; Dorr, "Apollo 16," *Space Mission Patches* website, <http://genedorr.com/patches/Apollo/Ap16.html>, accessed 30 June 2013; Apollo 17 Mission Insignia, NASA Image S69-52336 (September 1969),

<http://spaceflight.nasa.gov/gallery/images/apollo/apollo17/html/s72-49079.html>, accessed 30 June 2013; Dorr, "Apollo 17," *Space Mission Patches* website, <http://genedorr.com/patches/Apollo/Ap17.html>, accessed 30 June 2013.

¹³ Lattimer, p. 98-117; Still, p. 202-203; Apollo-Soyuz Mission Insignia, NASA Image S75-20361 (27 February 1975),

<http://spaceflight.nasa.gov/gallery/images/apollo-soyuz/apollo-soyuz/html/s75-20361.html>, accessed 30 June 2013; Dorr, "Apollo Soyuz Test Project," *Space Mission Patches* website, <http://genedorr.com/patches/Apollo/ApSo.html>, accessed 30 June 2013; "Apollo Soyuz Test Project," *Spacepatches.nl*,

<http://spacepatches.nl/astp/astp.html>, accessed 14 July 2013; Memos and images exchanged between officials at NASA's Johnson Space Center (Houston, Texas) and at NASA Headquarters (Washington, D.C.), archival materials from the Center Series, George W. S. Abbey Papers, ASTP Crew Patch 1974-1975, folder 4, box 10, JSC History Collection, UHCL Archives, Alfred R. Neumann Library, University of Houston—Clear Lake (sent to author on 15 July 2013).

Flags as Flair: The Iconography of Space Shuttle Mission Patches

By ANNE M. PLATOFF*

In the 1999 movie *Office Space*,¹ a waitress is required to wear “15 pieces of flair” (colorful buttons) on her uniform. She is instructed that they should show her personality, providing an opportunity to express herself. We live in a culture surrounded by such symbols, making this type of visual communication commonplace. Not surprisingly, this “flair” style of symbolic expression not only permeates our daily lives, but also has become commonplace in the formal system of symbolism used within the U.S. government. The flags, seals, logos, and other graphical emblems used throughout the government are awash with a plethora of symbols which are frequently combined with the intent of communicating something about the agencies or programs they represent. This article will examine one small subset of these symbols—the patches designed by the crews for Space Shuttle missions. It will examine the variety of symbols used, with special emphasis on the use of flags as “flair.”²

Part 2: Patches in the Space Shuttle Era

Part one of this article discussed the history of the National Aeronautics and Space Administration (NASA) mission patches during Project Gemini and the Apollo Program.³ The initiation of the Space Shuttle Program in 1981 opened up a new era for the design of mission patches. Flights into space became more frequent and crew sizes increased as the program progressed. An analysis of Space Shuttle mission patches reveals that the insignias designed for the flights also became more complex and incorporated a wider array of symbols. It was perhaps the larger crew size that led many of these patches to be more “flair like.” Just as the waitress in *Office Space* was encouraged to express herself through the wearing of more flair on her uniform, the larger crews may have felt that more symbols on their patches would help them to better reflect the interests of the individual astronauts, their roles in the missions, and the goals of their flights.

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Editor's Note / Note de la rédaction

A frustration common to people who study flags is explaining to non-vexillologists what we actually do. Not only does the word itself confound the uninitiated (vexillology can sound cold and pedantic upon first hearing), but in the experience of this writer most people assume that the study of flags can only relate to rah-rah patriotism or kitschy gift-shop stars-and-stripes umbrellas or T-shirts.

While these things without question find a welcome place under the big tent of flag studies, so too do complex historical investigations, scientific inquiries in the material sciences, and studies in semiotics, communication, material culture, and design. Perhaps then we should forgive others for not immediately seeing the breadth of our field and forgive ourselves if we sometimes feel foolish trying to explain it in fifty words or less.

I would argue that flag studies is not a unified academic discipline, but a dynamic dialogue, and that our boundary-defying studies do not take place on the margins, but in exciting contact zones where scholars and specialists from many different backgrounds find common ground and speak with one another. We inhabit not a niche or barren borderland, but a thriving intellectual crossroads.

In this issue of Flag Research Quarterly we celebrate this diversity of our field with two articles that began as presentations at the NAVA 47 annual meeting held in Salt Lake City, which testify that this crossroads draws strong and dedicated scholars from many different backgrounds. In the conclusion to her article which appeared in FRQ 4 (December 2013), Annie Platoff describes the complex interplay of political and national identity and design aesthetic in mission patches from NASA's Space Shuttle Program. Platoff's article examines an intersection of science, politics, and design, a unique and exciting space unlikely to find consideration in more traditional fields. Gwen Spicer's article, also a continuation from FRQ 4, exists at a different intersection defined by science and material culture, where her expertise will assist NAVA members and others to preserve their personal collections or the material archives with which they work in order to secure our cultural artifacts and the stories only they will tell for future generations.

Through articles like these, FRQ plays its part perhaps not in streamlining or simplifying vexillology, but in complicating it. We have chosen to study in a rich field often overlooked by others. Let us find not frustration, but satisfaction and pride, in exploring to the very edges of our domain.

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Platoff: Flags as Flair: The Iconography of Space Shuttle Mission Patches

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During the Shuttle era, designing a mission emblem was one of the first tasks assigned to a newly-formed crew of astronauts. Within NASA, creation of the patch design was considered to be an important team-building exercise. The crew understood that they were not just designing a patch to wear on their flight suits, but that they were also creating a symbol for everyone who was working on the flight. As astronaut Daniel Berry recalled in an interview, “The patch is one of the first things that the crew works on together It is not an ‘individual’ accomplishment. This very large team of people—the crew, the training people, and the mission control people—has this one badge that gives everybody a sense of working together.” Astronaut Jim Newman echoed this sentiment: “The predominant goal is to symbolize the flight. Everybody tries to be unique and add their own personal touch to it.” Summing up the importance of the patch to the mission, astronaut Scott Parazynski noted that “There’s a saying in the astronaut corps You’re not ready to fly until you’ve designed a patch.”⁴

Typically the crew would select one member to coordinate the design of the mission patch, often someone who was training for his or her first space flight. The job of this astronaut was to work with a graphic designer to help transform the ideas of the crew into a colorful emblem to represent the mission. As astronaut Leroy Chiao noted, “It is usually someone who is relatively new that will take the bull by the horns and get the patch going right away. With more veteran crews, after a while, somebody will finally volunteer to do it I guess your perspective changes after you’ve flown a couple of times, so it might take longer to get your patch out.”⁵

In some cases the crews commissioned a well-known graphic designer or space artist to help them with their patch designs. More typically they worked with a graphic designer on staff at the Johnson Space Center (JSC). For many artists, it was an opportunity to work with the astronauts and to make a contribution to a Space Shuttle mission. As one artist explained, “I never forget that the art I am creating is not mine, but belongs to the crew. It’s not my patch, but theirs. Accordingly, I will make suggestions based upon my experience, but the crew makes all the decisions. [We] are just the lucky guys able to work with people we respect and admire. How does it feel to contribute to space program history? ‘Priceless.’”⁶

Once the crew and the artist had completed their design, it was sent through the NASA approval process. It was then unveiled to the public and put into use as the primary visual representation for the mission. Astronauts, space workers, and members of the public alike collected items decorated with their badge including T-shirts, mugs, stickers, hats, and other souvenirs. During their training and flight, the astronauts

wore their crew patch on their flight suits and on their space suits, as well as on a variety of shirts that they donned in the “shirtsleeve environment” of the Space Shuttle. There were also many traditions in NASA associated with these emblems. Supplies of the patches were typically included in the Official Flight Kit (OFK)—a package of official souvenirs that NASA flew on each Space Shuttle mission. After the flight, these “space flown” patches were typically mounted on certificates and presented to people who had worked on the mission. Another post-flight tradition involved hanging a plaque with the patch design in the Mission Operations Control Room (MOCR)—commonly known as “Mission Control.” This room at the Johnson Space Center was the focal point for ground activity during a Space Shuttle mission. The honor of hanging the emblem went to one of the JSC employees who had contributed to the success of the flight. An additional use of the emblems was reserved for the mission director and other senior managers of each shuttle mission. These individuals were given the honor of hanging the mission emblem outside the door of their offices. As one JSC staffer explained, “If you want to know who has the real prestige within NASA, just look for the offices with the most patches In a culture that values achievement, these things have become our internal trophies and our currency.”⁷

Iconography of Space Shuttle Patches

An examination of Space Shuttle mission patches as a collection reinforces the impression of the “flair-like” use of symbols. While it is true that some of the emblems had simple, effective designs, there are many that have so many symbols incorporated into them that they become visually overwhelming. What does become clear is that the designs are effective representations of NASA as an institution, and of the values that are common within the agency. As Andrew Zolli observed, “The patches are perfect expressions of a culture that values science and achievement above visual gloss. The simplicity of the patches, with their mix of obscure private meanings and literal symbols of space exploration, convey the unique character of the astronaut mission teams—to themselves and to the larger organization.” Zolli quotes one NASA graphic designer, who commented on the authenticity of the designs, “If these were prettier, more abstract, or more ornamental, they wouldn’t be NASA The patches are utterly who we are.”⁸

When considering the symbols used on patches during previous U.S. manned spaceflight programs, which heavily emphasized the space hardware used during those programs, it should not be surprising that the majority of patches created during the Space Shuttle Program include the Space Shuttle

in the design. Of 135 mission patches used on shuttle flights, 123 of those (91%) picture the Space Shuttle. Most of them depict the shuttle in orbit, but 21 of the patches show the launch configuration of the Space Transportation System including the orbiter, solid rocket boosters, and external tank. Three patches illustrate the shuttle during re-entry, and one portrays the orbiter with landing gear down as it approaches the runway at the end of the mission. Of the patches that

show the Space Shuttle, 60 of them (44%) graphically portray the flight path of the orbiter during its mission. Perhaps some of the most stunning designs are those that include a visual representation of an OMS burn—the point in the mission when the shuttle Orbital Maneuvering System engines (located in two pods, one on either side of the vertical stabilizer at the tail) are firing as the shuttle changes orbit.⁹



Fig. 1-6. A sampling of patch designs depicting the Space Shuttle in flight. Top row: shuttle in orbit with the payload-bay doors open (STS-80); shuttle “stack” during launch (STS-27) and during re-entry when the nose is up and the black tiles are angled toward the atmosphere (STS-134). Bottom row: shuttle with landing gear down (STS-41-B); shuttle with a flight path (STS-83); and shuttle with an OMS burn shown behind (STS-38). (Images from *Wikipedia*)

Other hardware-oriented patches emphasize various payloads carried into orbit by the Space Shuttle, or hardware that was captured in orbit during repair missions. These emblems focus on the “work horse” aspect of the shuttle. Its larger size made it a versatile platform for mounted experiment

packages, for deployment of satellites and planetary spacecraft, and for capture-and-retrieval missions. Since these tasks were usually the primary purpose of a flight, it should be expected that this type of hardware would be documented on the mission insignias.¹⁰



Fig. 7-9. Patches showing payloads and other hardware vital to the flight objectives: deployment of a Tracking and Data Relay Satellite, TDRS-1 (STS-6); the shuttle prepares to retrieve the Long Duration Exposure Facility (LDEF) satellite (STS-32); and the Hubble Space Telescope (STS-82). (Images from *Wikipedia*)

During the Shuttle-Mir docking missions in which the U.S. Space Shuttle docked with a Russian-built space station and during the construction of the International Space Station (ISS), shuttle patches frequently showed hardware associated with those two projects such as the space stations, the docking

module in the shuttle's payload bay, and modules of the ISS that were carried into orbit aboard the Space Shuttle. In all, 8 shuttle mission patches picture the Russian space station Mir, while 27 show the International Space Station and 12 depict specific ISS elements.¹¹



Fig. 10-12: Patches showing space station hardware: insignia with both the Space Shuttle and the Russian space station Mir (STS-63); patch depicting the shuttle delivering the Zarya module to the ISS (STS-88); and emblem documenting the growth of the ISS (STS-112). (Images from *Wikipedia*)

There are also exploration-themed mission patches which use imagery from various ages of exploration. Four patches feature sailing ships, usually to reflect the practice of naming Space Shuttles after ships. One shuttle crew symbolized the great strides that have been made in aviation by placing the Wright Flyer, the first successful powered aircraft, underneath the Space Shuttle on their insignia. There were also several crews that paid tribute to the early pioneers of the U.S. space program. The patch of the STS-43 mission is shaped like

a Mercury capsule in commemoration of 30 years of U.S. human spaceflight. John Glenn, one of the original Mercury astronauts and a United States Senator, was a member of the STS-95 crew. The mission patch shows Glenn's "Friendship 7" Mercury capsule in orbit around an outline of a Space Shuttle. The numeral "7" on the patch represents the 7 members of the STS-95 crew and their historic link to the original 7 NASA astronauts from the Mercury era.¹²



Fig. 13-18. Exploration-themed shuttle patches. Top row: Discovery and her namesake ship (STS-41-D); Endeavour and its namesake (STS-49); a patch paying tribute to Christopher Columbus (STS-122); and a shuttle patch showing the Wright Flyer aircraft underneath the shuttle (STS-51-G). Bottom row left: emblem shaped like a Mercury capsule (STS-43). Bottom row right: patch featuring a Mercury capsule in orbit (STS-95). (Images from *Wikipedia*)

After the Space Shuttle, the second most common symbol used in mission insignia designs is the star, appearing on 109 different patches. As most vexillologists are aware, stars are a very versatile symbol. The astronauts found many ways to incorporate stars into their designs. On many of the patches the stars are simply background objects in space, but on 18 emblems they are shown in constellations that are familiar to residents of the astronauts' home planet. Sometimes the stars were given symbolic meanings, representing the number of

crew members (on 17 patches) or indicating the flight designation of the mission (on 17 patches). On six of the patches the only stars were part of a flag, while one patch uses an abstract star design. There are also 9 mission emblems which use stars to memorialize deceased colleagues, including 5 patches which use 7 stars to honor the astronauts lost in the Challenger accident and two designs which use stars in memory of those lost when Columbia broke up during re-entry.¹³



Fig. 19-22. Examples of patches with stars in the designs: eight stars indicating the mission designation (STS-8); stars decorating a nautical wheel (STS-51-C); 19 background stars arranged in the constellations of Leo and Orion and symbolizing the 19th shuttle flight (STS-51-F); and seven stars arranged in the Big Dipper and memorializing the seven Challenger astronauts (STS-26). (Images from *Wikipedia*)

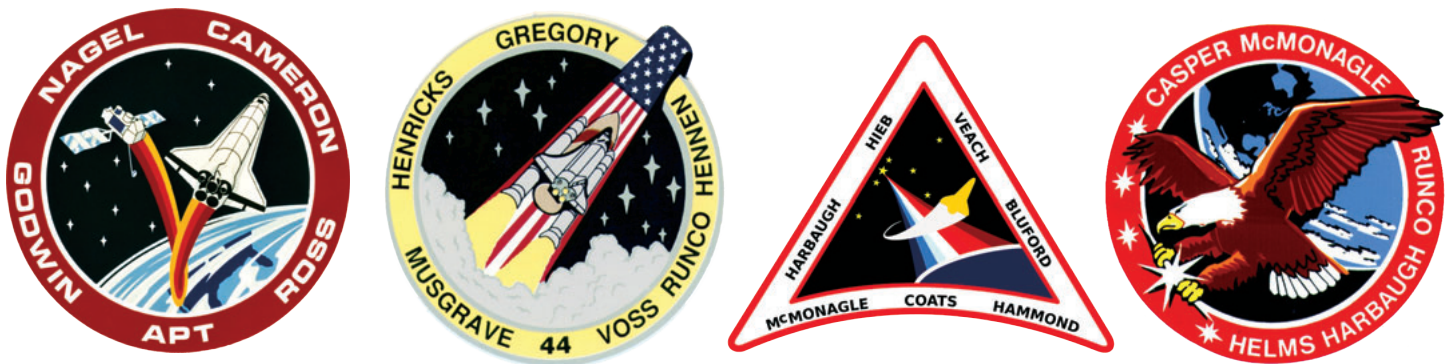


Fig. 23-26. Two groups of stars—in clusters of three and seven, representing the flight number (STS-37); a field of background stars in which the six largest indicate the number of crew members and the others symbolize all the people on the ground who had contributed to the mission (STS-44); the constellation Aquila, with Altair shown larger (STS-39); and an eagle delivering a large 8-pointed star to a constellation of four stars, representing the delivery of the 5th TDRS satellite into orbit (STS-54). (Images from Wikipedia)

Other symbols associated with outer space are also found in the designs of Space Shuttle mission insignia. Because all shuttle missions were Earth-orbital missions, the home planet is a common symbol and is found on 98 mission patches. Of those, 57 designs also depict the Earth's atmosphere. Astronauts frequently comment on how fragile the Earth and its atmosphere appear from orbit, and it is not surprising that they would include this imagery in their patch designs. The Sun is shown on 38 emblems, the Moon on four of them,

and other planets from our solar system are pictured on 12 patches. Often, the patches with planetary imagery were for missions that focused on the launch of planetary probes, but in a few cases the Moon and Mars are shown as potential “next steps” in the human exploration of outer space. There are also patches that use comets (2 patches) and galaxies (7 patches) in the design, typically from missions in which astronomical instruments such as space telescopes were part of the payload.¹⁴

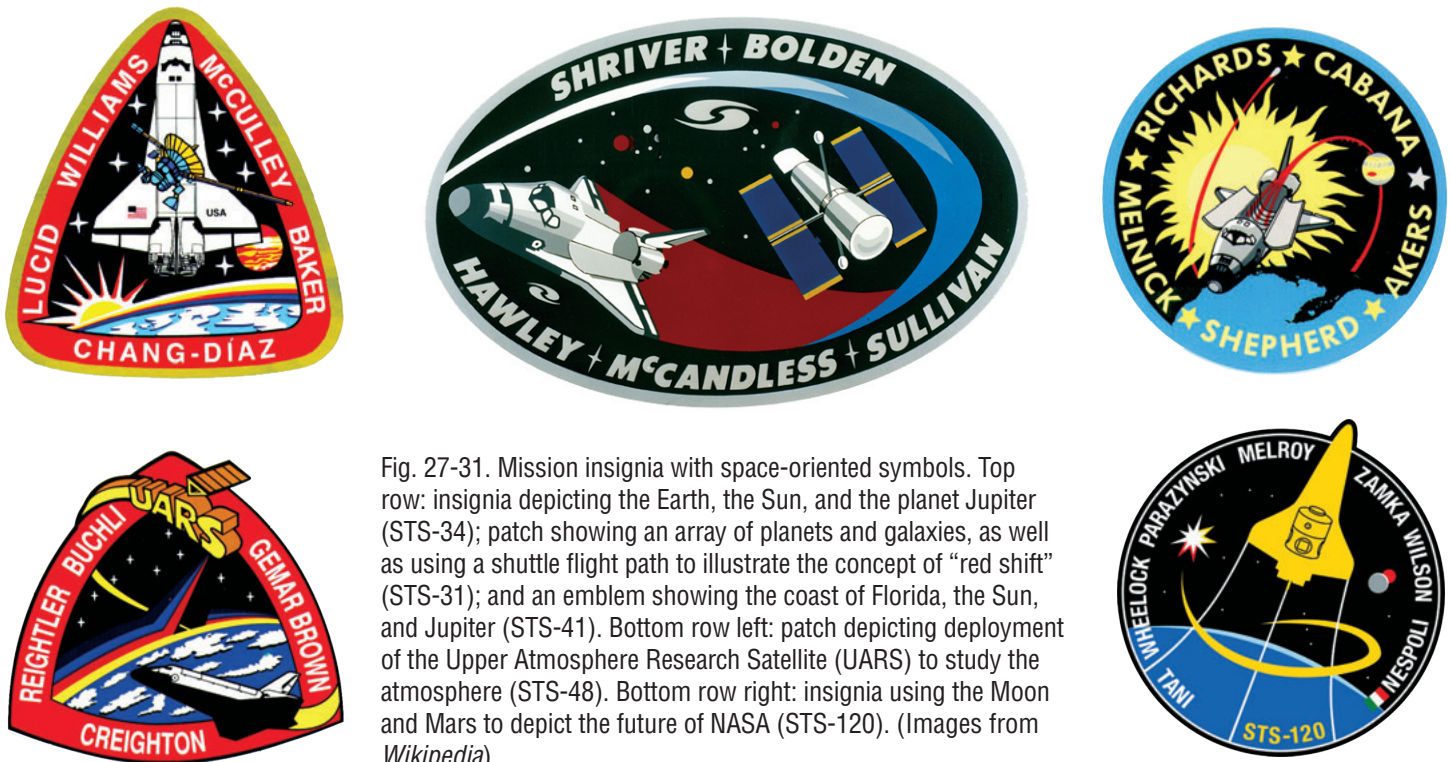


Fig. 27-31. Mission insignia with space-oriented symbols. Top row: insignia depicting the Earth, the Sun, and the planet Jupiter (STS-34); patch showing an array of planets and galaxies, as well as using a shuttle flight path to illustrate the concept of “red shift” (STS-31); and an emblem showing the coast of Florida, the Sun, and Jupiter (STS-41). Bottom row left: patch depicting deployment of the Upper Atmosphere Research Satellite (UARS) to study the atmosphere (STS-48). Bottom row right: insignia using the Moon and Mars to depict the future of NASA (STS-120). (Images from Wikipedia)

The symbols discussed in this section are just a sampling of those used by Space Shuttle crews to visually describe their missions. There is one other symbol that is frequently used on mission patches and warrants discussion here—the astronaut pin. This device is the official emblem of NASA's astronaut corps. A silver version of the pin is presented to those who

have completed astronaut training, while the gold version is reserved for those who have flown in space. On some patch designs the astronaut pin is shown in its usual configuration, while in others the crew used creative license to depict the device. In all, 34 Space Shuttle mission emblems incorporated the astronaut pin into their designs.¹⁵



Fig. 32-37. Top row: astronaut pin and patches incorporating the device into their designs: STS-59; STS-69; and STS-57. Bottom row: STS-61 and STS-64. (Images from *Wikipedia*)

The emblems described in the previous section illustrate the variety of symbols used by Space Shuttle crews in their patch designs. Some designs are well organized and use just enough imagery to make a simple and visually-distinctive patch. In other emblems, we are reminded of our waitress and the “flair” requirement—it seems as if the crews felt compelled to include every symbol that was slightly related to their mission. For the vexillologist, these other symbols are of peripheral interest. Symbols are just one element of the study of flags. It is the flags, themselves, that grab the attention of the vexillologist. How are the flags used? Why are these specific flags used? What meaning is conveyed by including the flag? For the vexillologist, there are many Space Shuttle patches that are of particular interest—those that use flag symbolism or entire flags to express something about the mission. It is this group of patches that warrant further examination here.

Flags and Flag Symbolism on Space Shuttle Patches

From the Gemini and Apollo programs, patches with flags or flag symbolism are rare. On the Space Shuttle patches they are quite common. If we consider all patches with a “red, white, and blue” color scheme to be flag-related, there are 94 patches (nearly 70% of all mission insignia) that fall into this category. Even if we only count the “red, white, and blue” emblems for which the crew specifically described the color scheme as flag-related, there are still 78 patches in this group (58%). Of the flag-related emblems, 35 patches incorporate

a complete flag into the designs. Other mission insignias use partial flags (18 patches), “implied” flags (27 patches), or just a symbol taken from (or inspired by) a flag design (5 patches). What is interesting to the vexillologist is how the use of flags changed over the 30 years that the Space Shuttle was used. Throughout the Space Shuttle Program, flags and flag elements were used in a variety of ways on mission patches. The specific flags used changed significantly as the nature of the program transformed and evolved.¹⁶

Not surprisingly, the United States flag is the most common flag used in patch designs. There are 68 insignias that either include the U.S. flag, or use symbols or colors drawn from the flag. On 26 of these patches, the flag is used as an emblem of national pride and is prominently displayed as a background image in the design. Examples include the badges for flights STS-41-G, STS-61-B, STS-51-L, and STS-104. On the insignia for STS-36 the dark blue canton and stars of the flag merge with the star-filled background of outer space, leaving the red and white stripes fluttering at the edge of the emblem. Other patches use small segments of a flag to suggest the presence of a complete flag. In some cases, the flag is substituted for the Earth in the patch design, with the Space Shuttle launching or orbiting above it. The insignias for STS-51-B, STS-53, and STS-76 are examples of this type of flag usage.¹⁷



Fig. 38-45. Patches with the U.S. flag as a background image or with the U.S. flag substituting for the Earth. Top row: STS-41-G; STS-61-B; STS-51-L; and STS-104. Bottom row: STS-36; STS-51-B; STS-53; and STS-76. (Images from *Wikipedia*)

In other designs various combinations of stars and stripes are used to imply the presence of the U.S. flag, such as in the patches for STS-50, STS-98, and STS-117. Sometimes a full flag or an implied flag is used to designate the flight path of the Space Shuttle as it orbited the Earth. Examples include the emblems of STS-2, STS-51-D, STS-51-I, STS-44, STS-51, STS-106, STS-118, and STS-119. There are also examples in which the red and white stripes from the U.S. flag, or a combination of red, white, and blue stripes, are used as the flight path. In a more straightforward approach, the STS-73

crew members simply placed two U.S. flags in the border of their patch along with their names. These varied uses of the U.S. flag are not surprising. Many of the astronauts, especially those who flew at the beginning of the Space Shuttle program, had started their careers in the U.S. military. Also, a lot of the people who contribute to the space program see their work as advancing the status of the United States, and thus the expression of patriotism and national pride has been a consistent element of NASA missions since the agency was established in 1958.

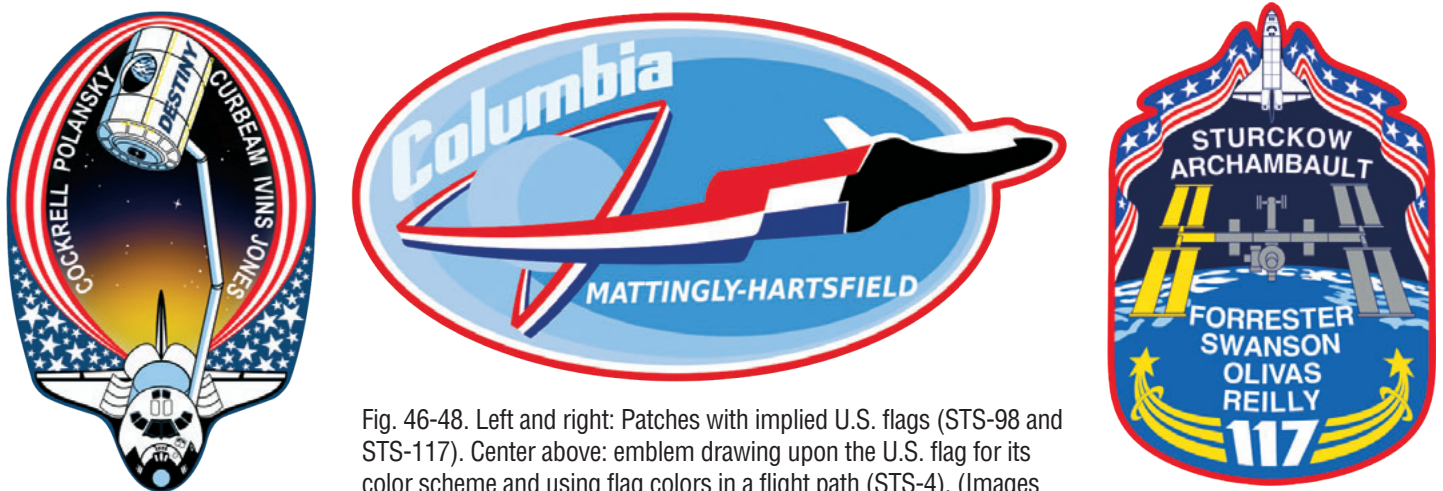


Fig. 46-48. Left and right: Patches with implied U.S. flags (STS-98 and STS-117). Center above: emblem drawing upon the U.S. flag for its color scheme and using flag colors in a flight path (STS-4). (Images from *Wikipedia*)



Fig. 49-56. Top row (first two patches): patch incorporating the stripes from the U.S. flag to form the wings of an eagle (STS-33) and patch with implied U.S. flag (STS-50). Top row (remaining two patches) and bottom row: mission emblems with the U.S. flag, or an implied flag, as a flight path (STS-2; STS-51-L; STS-44; STS-51-D; STS-118; and STS-119). (Images from *Wikipedia*)

While in the early days of the Space Shuttle Program it was often seen as an “American” effort, there were many important international contributions even at the beginning of the program. For example, the Canadian Space Agency designed and built the Remote Manipulator System (RMS). Commonly called the “Canadarm” or “robot arm,” this device was used to move payloads around in the payload bay while the shuttle was in orbit. The Canadarm was first used on the STS-2 flight in 1981 and was carried on 90 shuttle missions. Another important international contribution was the European Space Agency’s Spacelab module, a reusable laboratory that was mounted in the shuttle’s payload bay on 22 flights from 1983-1998. Other international contributions included satellites, experimental packages, and components for the construction of the International Space Station. In addition to hardware, there were also many international crew members who flew aboard the Space Shuttle. The first international shuttle astronaut was a West German who flew as part of the STS-9 crew in 1983. Throughout the course of the program there were 60 crews which included astronauts from nations other than the United States. Countries represented on the international crews included Belgium, Canada, France, Germany, Israel, Italy, Japan, Mexico, the Netherlands, Russia,

Saudi Arabia, Spain, Sweden, Switzerland, and Ukraine. In addition, there were also American astronauts from international backgrounds. For example, astronaut Franklin Chang-Diaz is a native of Costa Rica, and his heritage was reflected in the color scheme for the STS-111 patch.¹⁸

Once Space Shuttle missions became more international with payloads and crew members from various countries, other national flags (and elements thereof) were incorporated into mission patch designs. On many emblems the crew indicated the nationality of their international crew members by placing a national flag next to their names on the patch. Examples of this type of flag placement can be found on the emblems for STS-41-G (Canada), STS-51-G (France and Saudi Arabia), STS-61-B (Mexico), STS-87 (Ukraine), STS-120 (Italy), STS-131 (Japan), and STS-107 (Israel). Other crews selected to use just an element of a national flag next to a name to show nationality. This usage includes the maple leaves found next to the Canadian astronauts’ names on the patches for STS-42, STS-118, and STS-127, as well as the red sun from the Japanese flag on the emblem for STS-114. An additional example would be the patch for STS-52, on which the Canadarm holds a maple leaf.¹⁹



Fig. 57-67: Emblems which use flags or symbols from flags to indicate the nationality of crew members. Top row: STS-41-G (Canada); STS-51-G (France and Saudi Arabia); STS-61-B (Mexico); and STS-42 (Canada and also the ESA insignia). Middle row: STS-52 (Canada); STS-87 (Ukraine); STS-114 (Japan); and STS-107 (Israel). Bottom row: STS-120 (Italy); STS-127 (Canada); and STS-131 (Japan). (Images from Wikipedia)

Another method that crews chose to represent the international nature of their missions was to place flags, or partial flags, on their patches for all the countries represented. On these patches there seems to have been an effort to show the flags as equally important. Examples of this type of flag display include the patches for STS-46 (U.S. and Italy), STS-55 (U.S. and Germany), STS-68 (U.S., Germany, and Italy), STS-63 (U.S. and Russia), STS-71 (U.S. and Russia), STS-74 (U.S., Canada, and Russia), STS-81 (U.S. and Russia), STS-89 (U.S. and Russia), STS-91 (U.S. and Russia), STS-93 (U.S. and

France), STS-102 (Russia, U.S., and Italy), STS-100 (U.S., Russia, Italy, and Canada), STS-113 (U.S. and Russia), and STS-128 (U.S. and Sweden). Sometimes the flags are placed at the top or bottom of the patches. On other examples, they are grouped together just somewhere on the insignia. One of the most ornate displays of international flags is on the patch for STS-128, on which the flags of the United States and Sweden are incorporated into a “ribbon” that defines the outline of the emblem.²⁰



Fig. 68-77: Patches using flags to denote international missions. Top row: STS-46 (U.S. and Italy); STS-68 (U.S., Germany, and Italy); STS-55 (U.S. and Germany); and STS-63 (U.S. and Russia). Middle row: STS-71 (U.S. and Russia); STS-74 (U.S., Canada, and Russia); STS-79 (U.S. and Russia); and STS-93 (U.S. and France). Bottom row: STS-100 (U.S., Russia, Italy, and Canada); and STS-128 (U.S. and Sweden). (Images from *Wikipedia*)

On some international mission patches the crews got more creative. Just as with the patches that use the U.S. flag as a flight path, there are also patches in which combinations of U.S. and other flags are used as flight paths or orbital paths. Examples of this usage can be found on the emblems for STS-61-A (U.S. and Germany), STS-47 (U.S. and Japan), STS-86 (U.S., Russia, and France), STS-105 (U.S. and Russia), STS-111 (U.S., Russia, France, and Costa Rica), and STS-116 (U.S. and Sweden). Careful observation of the

patch for STS-86 shows how the crew was able to use the three paths on the astronaut pin to represent the flags of three different countries. At the top of the emblem, the paths are ordered white, blue, and red in the order of the Russian flag. Below the Earth, they are ordered blue, white, and red just as on the French flag. To represent the United States, the crew chose to add white stars to the blue path so that together with the white-and-red stripe it forms an implied U.S. flag.²¹



Fig. 78-84: Patches that use multiple flags as flight paths: Top row: STS-61-A (U.S. and Germany); STS-47 (U.S. and Japan); and STS-101 (U.S. and Russia). Bottom row: STS-86 (U.S., Russia, and France); STS-106 (U.S. and Russia); STS-105 (U.S. and Russia); and STS-116 (U.S. and Sweden). (Images from *Wikipedia*)

Three other patches bear mention for their unique uses of flags. On the insignia for STS-51, the dominant flag imagery is an implied U.S. flag woven together by two intertwining flight paths. Careful examination reveals another flag—that of Germany—which is reshaped into the form of SPAS-ORFEUS, a payload deployed and later retrieved by the shuttle during the mission. The Japanese flag is similarly used on the STS-124 mission patch, as it has been reformed into

the shape of a Japanese module which the shuttle delivered to the International Space Station. In addition, the crew placed the U.S. flag at the top above the mission designation. The final example is perhaps one of the most interesting uses of international flags. On the insignia for STS-60 the flags of the U.S. and the Russian Federation have been formed into a set of wings, placed on the patch behind the Space Shuttle in flight.²²

Fig. 85-87: Patches with flags as spacecraft or flags as wings: STS-51 (U.S. and Germany); STS-124 (U.S. and Japan); and STS-60 (U.S. and Russia). (Images from *Wikipedia*)



Conclusion

Examined as a set, the flag-inspired mission patches demonstrate various uses of flags to express the patriotism of the crews, to represent the nationalities of international crew members, and to acknowledge the contributions of NASA's international partners to specific Space Shuttle missions and to the construction of the International Space Station. They also show a shift in the nature of both the U.S. space program and in space exploration in general. The U.S. space program was originally launched as part of "The Space Race," a phase of the Cold War in which the U.S. and the Soviet Union competed to achieve important "firsts" in space. It is quite clear from the 68 patches which use the U.S. flag as part of the design that the U.S. still views its achievements in space as a great source of international prestige. But even more significant is the shift that can be seen in the patches from the Space Shuttle era which serve to illustrate the transformation of the program from an U.S. space program into a truly international program. In the early years of the program, we see the flags of traditional U.S. allies incorporated into patch designs. But after the breakup of the Soviet Union, we see a new era of cooperation reflected in shuttle crew emblems. The Russian flag is the second most represented, shown on 17

mission insignias. This demonstrates that the U.S. and Russia have become partners in space—first working together on the Shuttle-Mir docking missions and later as two of the key players in a multinational effort to construct and operate the International Space Station.

Placing the flags within the broader context of the iconography of all Space Shuttle mission emblems, we recognize the importance of flags and flag symbolism within our culture. The fact that the crews chose to represent their missions with flags further illustrates the significance of these symbols both in U.S. culture and within the sphere of international cooperation. This use of flags as "flair" reminds us that the study of flags involves not just the documentation of flag designs and the history of specific flags, but also extends to the sociological importance of flags as identifiers of nationality. Incorporating specific elements of flags, combining elements of different flags, and displaying groups of flags together in sets are all ways in which the astronauts chose to emphasize the new age of cooperation in space and the importance of international partnerships to their missions. By looking at the use of flags within the small set of Space Shuttle mission patches, we can learn more about the broader cultural context of flags in our modern global society.

Notes

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¹ *Office Space*, directed by Mike Judge (1999; Los Angeles, CA: Twentieth Century Fox Home Entertainment, 2009), DVD.

² The *Urban Dictionary* offers the following definition of "flair":

"Flair" is a general term used to describe round buttons of various sizes pinned to one's shirts and used to express one's self. Popularized by the 1999 film "Office Space," where a restaurant "Chotchkie's" required employees to wear "at least" 15 pieces of flair.

Definition of "flair", *Urban Dictionary*, <http://www.urbandictionary.com/define.php?term=flair>, accessed 21 Oct. 2013.

³ Anne M. Platoff, "Flags as Flair: The Iconography of Space Shuttle Mission Patches," *Flag Research Quarterly* no. 4 (Dec. 2013), p. 1, 3–8.

⁴ Astronaut quotes are from Travis K. Kircher, "More Than Just a Merit Badge," *Ad Astra* (Nov/Dec 2000), p. 23–25, available online at http://www.collectspace.com/resources/patches_astronauts.html, accessed 3 Apr. 2013; and Andrew Zolli, "One Giant Leap for Identity: Designing NASA's Mission Patches," *Design Management Journal*, vol. 14, no. 4 (Fall 2003), p. 35–37. See also Nicole Torres, "Space Was the Place," *Print*, vol. 65, no. 4 (Aug. 2011), p. 14; Eugene Dorr, *Space Mission Patches* website, "About Patches," <http://genedorr.com/patches/About.html>, accessed 3 Apr. 2013.

⁵ Astronaut quote is from Kircher, "More Than Just a Merit Badge"; Zolli, p. 35–37; Dorr, *Space Mission Patches* website, "About Patches."

⁶ Tim Gagnon, "Designing a Dream: Creating the Patch Artwork for Space Missions," *Ad Astra*, vol. 22, no. 4 (Winter 2010), p. 44–45; Kircher; Zolli; Dorr, *Space Mission Patches* website, "About Patches."

⁷ Zolli; Russell F. Still, *Relics of the Space Race*, 3rd ed. (Roswell, GA: PR Productions, 2001) p. 103–104; Dorr, *Space Mission Patches* website, "About Patches."

⁸ Zolli, p. 35–37.

⁹ Analysis of symbols on Space Shuttle mission patches undertaken by the author. Space Shuttle mission patches are taken from *Wikipedia: The Free Encyclopedia*. The easiest way to view patches for various missions is to start at the article for "List of Space Shuttle Missions" (http://en.wikipedia.org/wiki/Space_Shuttle_Missions) and then click on the patches for each mission to see larger images.

¹⁰ Analysis of symbols by the author; images from *Wikipedia*.

¹¹ *Ibid.*

¹² *Ibid.*; STS-95 image and description, http://spaceflight.nasa.gov/gallery/images/shuttle/sts-95/html/sts095_s_001.html, accessed 4 July 2013.

¹³ Analysis of symbols by the author; images from *Wikipedia*.

¹⁴ *Ibid.*

¹⁵ "NASA Astronaut Pins" in "Astronaut Badge," *Wikipedia: The Free Encyclopedia*, http://en.wikipedia.org/wiki/Astronaut_Badge, accessed 5 July 2013.

¹⁶ Analysis of symbols by the author; images from *Wikipedia*.

¹⁷ *Ibid.*; Judith Kaplan and Robert Muniz, *Space Patches: From Mercury to the Space Shuttle* (New York: Sterling Publishing Co., 1986), p. 13–17, 69–102; Anne M. Platoff, "Flags in Space: NASA Symbols and Flags in the U.S. Manned Space Program," *Flag Bulletin*: no. 230 (vol. 46, no. 5–6) (Sept.-Dec. 2007); actually published in 2010, p. 163–164.

¹⁸ "Canadarm," *Wikipedia: The Free Encyclopedia*, <http://en.wikipedia.org/wiki/Canadarm>, accessed 5 July 2013; "Spacelab," *Wikipedia: The Free Encyclopedia*, <http://en.wikipedia.org/wiki/Spacelab>, accessed 5 July 2013; "List of Space Shuttle Crews," *Wikipedia: The Free Encyclopedia*, http://en.wikipedia.org/wiki/List_of_Space_Shuttle_crews, accessed 5 July 2013; Anne M. Platoff, "A Shuttle Full of Flags: Use of Flags in the Space Shuttle Program," presented to the 25th International Congress of Vexillology (ICV 25), publication pending in the Congress proceedings (Aug. 2013).

¹⁹ Analysis of symbols by the author; images from *Wikipedia*; Platoff, "Flags in Space: NASA Symbols and Flags in the U.S. Manned Space Program," p. 163–64.

²⁰ *Ibid.*

²¹ *Ibid.*

²² *Ibid.*